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Title : Change of Position and Proximity between Mothers and Their Calves by the Age of the Calf in Wild Indo-Pacific bottlenose dolphins (*Tursiops aduncus*)

Category : Behavior

Student : M.A./M.S.

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Abstract : To examine the changing spatial relationship within mother-calf pairs by calf's age in wild Indo-Pacific bottlenose dolphins (*Tursiops aduncus*), underwater dolphin behavior was videotaped from May to September, 2002 around Mikura Island, Tokyo, Japan. On 101 surveys, a total of 589 min. were recorded and 29 mother-calf pairs were observed. Calves were divided into four age categories: 8 (3 males, 5 sex unknowns) neonates, 12 (6 males, 4 females, 2 sex unknowns) one-year-old calves, 6 (3 males, 2 females, 1 sex unknown) two-year-old calves, and 3 (2 males, 1 female) three-year-old calves. We analyzed the position of the calf to the mother (front, back, side, dorsal, ventral) and the proximity (touch, near contact (<0.5 m), close (0.5 - 2.0 m), and far (>2.0 m)) between mother and calf. Neonates showed the highest proportion (75.0%) of the distance closest to and of the position at the side (64.4%) of their mothers. The proportions then decreased as calf's age increased. From one year old, calves showed an increase in the proportion of time spent at far distance and in position ventral to their mothers. No significant difference was detected in position and proximity by calf gender. When calves were not with their mothers, neonates were with an older escort, not alone. Regardless of the group behavioral state (resting, milling, traveling, inquiring, socializing) including the mother-calf pairs, neonates positioned close to their mothers. From one year old, calves tended to be apart from their mothers when the group was in a state of inquiring. In this study, we determined that the calf's changing position with respect to the mother's body and the proximity between mothers and calves are related to the calf's development (i.e., age). These changes in position and proximity affected a calf's swimming level and interaction with other group members.